



PROTECTING THE SNOW CRAB RESOURCE

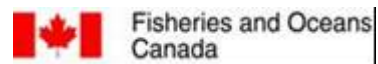


WHAT CAN YOU DO?

Presented by:

***The Canadian Centre for Fisheries Innovation
The Association of Seafood Producers
The Fish Food and Allied Workers Union
&
Centre for Aquaculture and Seafood Development
Centre for Sustainable Aquatic Resources***

The Marine Institute of Memorial University





CRAB HANDLING

Handling-induced mortality is recognized as having a negative impact on the future fishery.

Currently a significant portion of the undersized, soft shell and other discarded crab are mishandled in some manner before they are returned to the sea.

They are:

- Dropped from heights of 2 to 4 feet on deck and into the water
- Kept out of the water for 30 to 60 minutes

What are the impacts?

- At least 16% mortality of all crab returned to the sea after being dropped 2 feet and kept out of the water for 30min.
- At least 42% mortality of all crab returned to the sea after being dropped 4 feet and kept out of the water for 60min.

SOFT SHELL CRAB

- Soft-shelled mortality is 2 to 6 times higher than hard-shelled, up to 88% mortality of discards in the summer.

RECOMMENDATIONS

- Measures must be taken to eliminate dropping of undersized and other discarded snow crab and reduce the length of time these crab are held out of the water to **five minutes or less**.
- Measures must be taken to investigate harvesting strategies and gear selectivity devices that avoid catching undersized and soft-shelled snow crab.



CRAB SELECTIVITY

It is necessary to investigate pot designs that catch commercial quantities of legal-sized snow crab (>3.74”), but at the same time catch significantly less undersized crab than pots currently in use.

Escape mechanisms are the most common selectivity device used in lobster and crab fisheries worldwide.

Advantages of Escape Mechanisms

- Reduce the sorting time required by fishers
- Reduce the number of undersize crab injured by handling or exposure at the surface
- Increase the percentage of larger crab in the catch
- Facilitate escapement of non targeted species



- Cheaper than re-meshing older pots with larger mesh
- Size-selectivity is more “precise” owing to the rigid shape of escape openings and rigid shell of crab
- If rigged with a biodegradable or corrodible link, the mechanisms will fall inward if the pot is lost – reducing mortality due to ghost fishing.

BITTER CRAB DISEASE (BCD)

Characteristics of BCD

It is virtually impossible to detect BCD in crab in the early stages of infection. Physical changes in the crab are only detected when the crab is in the advanced stages of the disease.

- The crab is in a weakened state and may appear dead
- The upper shell has an orange-pink colour, especially along the edges
- The crab looks as if it has been cooked. The legs are a bright orange-red colour



- The underside of the body is chalky white
- The joints of the legs are pinkish with red streaks
- The meat has almost liquefied, when cooked it has a very “bitter” taste

Disposal of BCD (BCD crab is not considered catch and therefore do not come off of an individual's quota)

- During harvesting, all crab that show any visual signs of BCD must be retained in closed, watertight containers for landfill disposal on shore.
- Under no conditions should BCD infected crab be returned to the water.
- Crab must be culled on-board in the location where pots are set to prevent spread of the disease to non-infected areas.